

09/926243

ABSTRACT

There are provided a polishing apparatus and a polishing method capable of performing polishing a work (such as a wafer) with high efficiency and high precision, a novel work holding plate effectively holding a work and an adhering method for a work capable of adhering the work on the work holding plate with high precision. The polishing apparatus comprises: a polishing table(29); and a work holding plate(38), wherein a work held on the work holding plate(38) is polished supplying a polishing agent solution(41) in the apparatus, and in polishing action, an amount of deformation of the polishing table(29) in a direction normal to an upper surface thereof with respect to the upper surface thereof and/or an amount of deformation of the work holding plate(38) in a direction normal to a work holding surface thereof is restricted to 100 μm or less by forming the polishing table(29) in one-piece, contriving flow paths of cooling water and others.

09/926243
H03260

(12)特許協力条約に基づいて公開された国際出願

(19) 世界知的所有權機關
國際事務局



(43) 国際公開日
2001年8月9日 (09.08.2001)

PCT

(10) 国際公開番号
WO 01/56742 A1

(51) 國際特許分類⁷⁾:

B24B 37/04, 37/00

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(21) 国際出願番号:

PCT/JP01/00568

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(26) 国際公開の言語:

日本語

(JP).

(30) 優先権データ:

特願2000-22591 2000年1月31日(31.01.2000) JP

(81) 指定国(国内): KR, SG, US.

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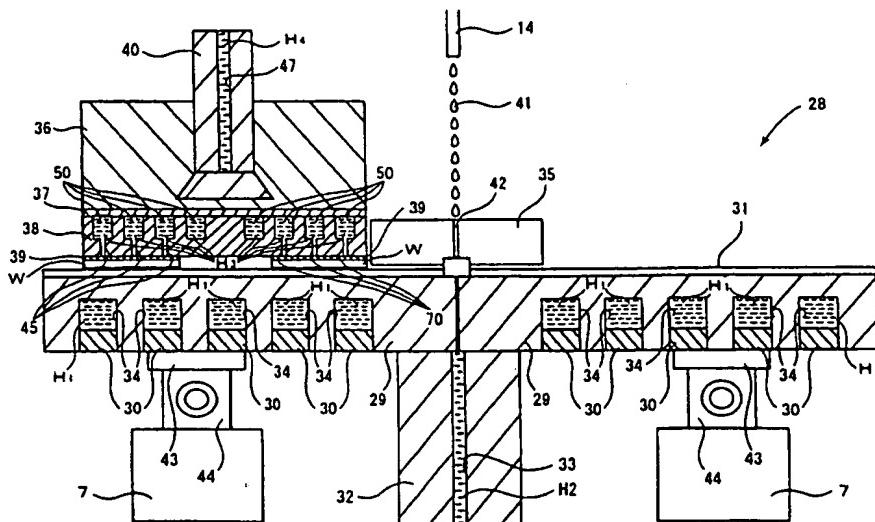
(84) 指定国(広域): ヨーロッパ特許(AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR).

添付公開書類:
— 國際調查報告書

〔続葉有〕

(54) Title: POLISHING DEVICE AND METHOD

(54) 発明の名称: 研磨装置及び方法



WO 01/56742 A1

(57) **Abstract:** A polishing device and a polishing method, wherein high-efficiency high-accuracy mirror finishing of work (including wafers) is made possible; a novel work holding plate for effectively holding work; and a work bonding method capable of highly accurately bonding work to such work holding plate. The polishing device comprises a polishing surface plate (29) and a work holding plate (38), so that work held by the work holding plate (38) is polished while applying a flow of polishing agent solution (41) onto the work, wherein the amount of deformation of the polishing surface plate (29) as measured normally of the surface of the surface plate and/or the amount of deformation of the work holding plate (38) as measured normally of the work holding surface of the work holding plate (38) is controlled during polishing to be not more than 100 μ m by finding ingenious ways including integration of the polishing surface plate (29) and improvement of the flow channel for cooling water.

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